

WHAT IS CLAIMED IS:

1 1. An electronic apparatus for control of vocalization by a dog, comprising:

2 (a) a housing supported against the animal's skin;

3 (b) first and second stimulus electrodes connected to a surface of the housing;

4 (c) a vibration sensor supported by the housing for producing signals in
5 response to vocalizing by the dog;

6 (d) control circuitry in the housing having an input coupled to receive the
7 signals produced by the vibration sensor, the control circuitry including output terminals
8 producing aversive stimulus signals in response to the signals produced by the vibration sensor;

9 (e) a motion detector connected in substantially fixed relationship to a portion
10 of the dog for producing a motion detection signal in response to a characteristic movement of
11 the portion of the dog that characteristically accompanies barking by the dog; and

12 (f) the control circuitry having an input coupled to receive the motion
13 detection signal and operative in response to the motion detection signal to allow the control
14 circuitry to produce the aversive stimulus signal between the first and second stimulus electrodes

15 in response to the signals received from the vibration sensor.

1 2. The electronic apparatus of claim 1 including circuitry configured to reset the
2 control circuitry from a low-power operating mode into a normal operating mode in response to
3 the motion detection signal.

1 3. A collar-mounted electronic apparatus for control of barking by a dog,
2 comprising:

3 (a) a housing supported by a collar for attachment to the dog's neck;

4 (b) first and second stimulus electrodes connected to a surface of the housing
5 for applying aversive stimulus control signals to the dog's neck;

6 (c) a vibration sensor supported by the housing for producing vibrations in
7 response to vocalizing by the dog;

8 (d) a controller in the housing having an input coupled to receive the signals

9 produced by the vibration sensor, the controller including output terminals for producing aversive
10 stimulus control signals in response to the signals produced by the vibration sensor;

11 (e) a motion detector connected in substantially fixed relationship to the
12 housing for producing a neck motion detection signal in response to a characteristic neck
13 movement of the dog that characteristically accompanies barking by the dog;

14 (f) the controller having an input coupled to receive the neck motion detection
15 signal and operative in response to the neck motion detection signal to enable the controller to
16 produce the aversive stimulus control signals; and

17 (g) circuitry coupled to the controller to produce the aversive stimulus signals
18 between the first and second stimulus electrodes in response to the aversive stimulus control
19 signals.

1 4. The electronic apparatus of claim 3 including circuitry configured to reset the
2 controller from a low-power operating mode into a normal operating mode in response to the
3 neck motion detection signal.

1 5. The collar-mounted electronic apparatus of claim 3 including a battery monitor
2 circuit coupled to a battery that powers the electronic apparatus, the battery monitor circuit
3 including an output coupled to a reset input of the controller to reset the controller to a non-
4 operative high impedance output mode, a first LED driver circuit having an input coupled to a
5 first LED driver output of the controller, the first LED driver circuit including a light emitting
6 diode having a first electrode coupled by a first resistor to the battery and a second electrode
7 coupled by the transistor to a reference voltage, the transistor having a control electrode coupled
8 by a second resistor to the battery, the control electrode being coupled to the first LED driver
9 output of the controller.

1 6. A method for controlling vocalization by an animal, comprising:

2 (a) supporting first and second stimulus electrodes against the animal's skin;

3 (b) producing signals in response to vocalizing by the animal by means of a
4 vibration sensor;

5 (c) connecting a motion detector in substantially fixed relationship to a
6 portion of the animal for producing a motion detection signal in response to a characteristic
7 movement of the portion of the animal that characteristically accompanies vocalization by the

8 animal; and

9 (d) operating control circuitry having a first input coupled to receive the
10 signals produced by the vibration sensor and a second input coupled to receive the motion
11 detection signal to produce aversive stimulus control signals in response to the signals produced
12 by the vibration sensor if a motion detection signal is received concurrently with the signals
13 produced by the vibration sensor.

1 7. The method of claim 6 including operating the control circuitry to switch from a
2 low-power operating mode into a normal operating mode in response to the motion detection
3 signal.

1 8. A device for controlling vocalization by an animal, comprising:

2 (a) means for supporting first and second stimulus electrodes against the
3 animal's skin;

4 (b) means for producing signals in response to vocalizing by the animal by

5 means of a vibration sensor;

6 (c) means for connecting a motion detector in substantially fixed relationship
7 to a portion of the animal for producing a motion detection signal in response to a characteristic
8 movement of the portion of the animal that characteristically accompanies vocalization by the
9 animal; and

10 (d) means for operating control circuitry having a first input coupled to
11 receive the signals produced by the vibration sensor and a second input coupled to receive the
12 motion detection signal to produce aversive stimulus control signals in response to the signals
13 produced by the vibration sensor if a motion detection signal is received concurrently with the
14 signals produced by the vibration sensor.

1 9. The method of claim 8 including operating the control circuitry to switch from a
2 low-power operating mode into a normal operating mode in response to the motion detection
3 signal.